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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
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0018

DATE MAILED:

04/11/00

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/480,044

Applicant(s)
Jackie R. Gust et al.

Examiner
Britton Michael

Group Art Unit
3618



☒ Responsive to communication(s) filed on Jan 10, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-13 and 23-25 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-13 and 23-25 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Acknowledgment

1. The applicant's request for an Interference is acknowledged. If the effective filing date of the application is 3 months or less than 3 months after the effective filing date of the patent, the applicant must submit a statement alleging that there is a basis upon which applicant is entitled to a judgement relative to patentee. 37 CFR 1.608(a). See MPEP Sec. 2308.02.

Specification

2. The disclosure is objected to because of the following informalities: On page 11, lines 34 and 35, reference numbers 111 and 115 are not indicated in the drawings. On page 12, line 19, reference number 78 is referred to as representing a battery when 76 is intended.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

4. Claims 1, 7,8-10,12,13, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Reimers et al..

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Reimers et al. discloses an electric drive mower with motor generator set comprising a frame (12), ground engaging wheels (14,16), at least one electric motor connected to at least one of the wheels (Column 7, line 51), at least one turf maintenance operating unit (Column 5, line 33), at least one electric motor connected to the operating unit (22), an electric drive system comprising, an internal combustion engine (92), an electric power generating device driven by engine (31), a battery power source (84), an electric power supply circuit for connecting the electric motor to the power generating device and to the battery power source to allow electric power to be supplied from either/or, the electric power generating device is connected to the battery for recharging during operation of the internal combustion engine (Column 7, line 53), the electric power generating comprising an alternator (114), a controller for controlling application of the electric power to the motors (130), where two of the wheels are individually driven by separate electric motors (148,150), where the machine comprises a grass mowing machine and where the operating unit comprises a grass cutting unit (Column 1, line 5), where the grass mowing machine comprises a riding lawn mower (Column 1, line 5).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 -6, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reimers et al. in view of Arendt.

Reimers et al. discloses the claimed invention including means for sensing a state of charge of the battery power source and means for reporting same to a user of the machine (Column 22, line 23), and indicating when the state of the charge is below a predetermined level (Column 22, line 32). Reimers et al. does not disclose a switch for shutting off the internal combustion engine to make the battery source the sole source of electric power for the motors, a switch operable by the user to select when the battery power source shall serve as the sole source of electric power and means for preventing operation from only the battery source when the state of charge of the battery is below a minimum level.

Arendt discloses a self charging electric vehicle with a switch for shutting off the internal combustion engine to make the battery source the sole source of electric power for the motors (Column 1, line 65), a switch operable by the user to select when the battery power source shall serve as the sole source of electric power (Column 1, line 65) and means for preventing operation from only the battery source when the state of charge of the battery is below a minimum level (Column 2, line 90) to vary the operation of the vehicle depending upon the driving conditions.

It would have been obvious to one having ordinary skill in the art to modify Reimers et al.'s electric drive mower with motor generator set to include Arendt's self charging electric vehicle with a switch for shutting off the internal combustion engine to make the battery source

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the sole source of electric power for the motors), a switch operable by the user to select when the battery power source shall serve as the sole source of electric power and means for preventing operation from only the battery source when the state of charge of the battery is below a minimum level to vary the operation of the vehicle depending upon the driving conditions.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reimers et al. in view of Downing Jr..

Reimers et al. discloses the claimed invention except for a steering wheel and a controller controlling the supply of electric power from the electric drive system to the electric motors with means to responsive to the steering wheel to vary the power supplied to each motor to effect a differential action during a turn.

Downing Jr. discloses an electric tractor with a steering wheel and a controller controlling the supply of electric power from the electric drive system to the electric motors with means to responsive to the steering wheel to vary the power supplied to each motor to effect a differential action during a turn (Column 4, line 6) to allow short or sharp turns.

It would have been obvious to one having ordinary skill in the art to modify Reimers et al.'s electric drive mower with motor generator set to include Downing Jr.'s electric tractor with a steering wheel and a controller controlling the supply of electric power from the electric drive system to the electric motors with means to responsive to the steering wheel to vary the power supplied to each motor to effect a differential action during a turn to allow short or sharp turns.

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Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shibata et al. discloses a device for charging a storage battery.

Namdari discloses an apparatus for collecting and compacting leaves and grass clippings.


Kitada discloses an electric hybrid vehicle.

Urban et al. discloses a drive system for an electric hybrid vehicle.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Britton whose telephone number is (703)306-5772.

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April 7, 2000


BRIAN L. JOHNSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600
4/7/00